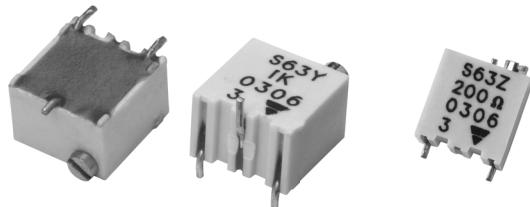


Multi-Turn Surface Mount Miniature 1/4" Square Cermet Trimmers, Fully Sealed



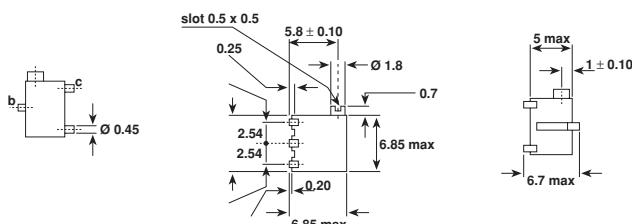
The TS63 multturn trimmer has been designed for use in PCB surface mounting applications.

Three variations are available according to the positioning of the control screw and contact positions.

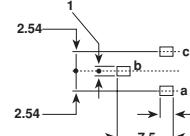
The cermet track gives a high stability performance with an extended ohmic capacity of 10Ω to $2M\Omega$.

DIMENSIONS in millimeters

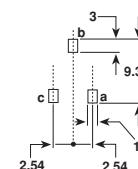
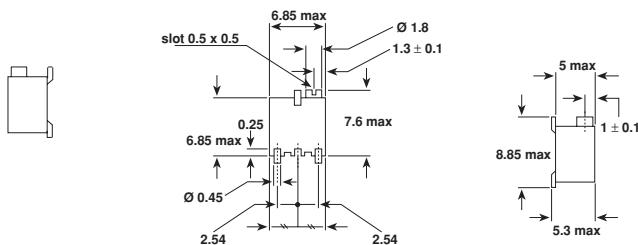
TS63X



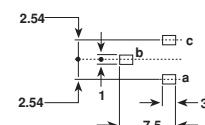
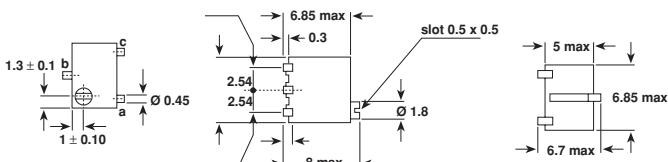
RECOMMENDED SOLDERING AREAS



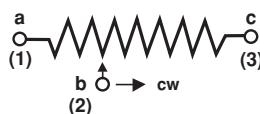
TS63Z



TS63Y



CIRCUIT DIAGRAM



ELECTRICAL SPECIFICATIONS

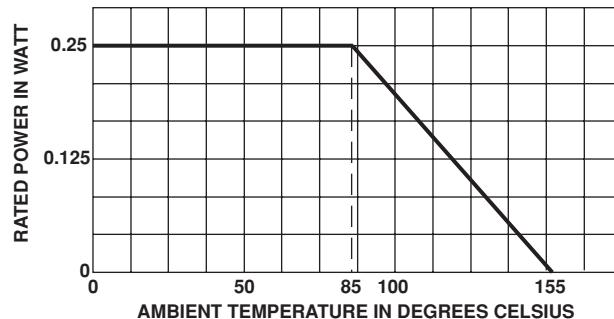
Resistive Element	Cermet	
Electrical Travel	13 turns \pm 2	
Resistance Range	10 Ω to 2M Ω	
Standard Series	1 - 2 - 5	
Tolerance	Standard	\pm 10%
	On request	\pm 5%
Power Rating	Linear	0.25W at 85°C
	Logarithmic	not applicable
Temperature Coefficient	See Standard Resistance Element Data	
Limiting Element Voltage (Linear Law)	250V	
Contact Resistance Variation	2% Rn or 2 Ω	
End Resistance (Typical)	1 Ω	
Dielectric Strength (RMS)	1000V	
Insulation Resistance	10 ⁶ M Ω	

MECHANICAL SPECIFICATIONS

Mechanical Travel	15 turns \pm 5
Operating Torque (max. Ncm)	1.5
End Stop Torque	clutch action
Unit Weight (max. g)	0.5

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	- 55°C to + 155°C
Climatic Category	55 / 125 / 56
Sealing	sealed container solder immersion IP67

POWER RATING CHART

PERFORMANCE

TESTS	CONDITIONS	CECC 41100		TYPICAL VALUES AND DRIFTS	
		$\frac{\Delta RT}{RT}$ (%)	REQUIREMENTS	$\frac{\Delta R_{1-2}}{R_{1-2}}$ (%)	$\frac{\Delta RT}{RT}$ (%)
Climatic Sequence	Phase A dry heat 125°C Phase B damp heat Phase C cold – 55°C Phase D damp heat 5 cycles	\pm 2%	\pm 3%	\pm 0.5%	\pm 1%
Long Term Damp Heat	56 days	\pm 2%	\pm 3%	\pm 0.5%	\pm 1%
		Dielectric strength: 250 V RMS Insulation resistance: > 100 M Ω		Dielectric strength: 1000 V RMS Insulation resistance: > 10 ⁴ M Ω	
Rotational Life (Electrical, Mechanical)	200 cycles at rated power	\pm 2 % Contact res. variat.: < 3% Rn		\pm 2 % Contact res. variat.: < 1% Rn	
Load Life	1000 h at rated power 90'/30' - ambient temp. 85°C	\pm 2%	\pm 4%	\pm 1%	\pm 2%
Thermal Shock	5 cycles – 55°C to + 125°C	\pm 1.5%	$\frac{\Delta V_{1-2}}{V_{1-3}}$	\pm 1%	\pm 0.5% $\frac{\Delta V_{1-2}}{V_{1-3}}$ < \pm 1%
Shock	50 g at 11m secs 3 successive shocks in 3 directions	\pm 1%	\pm 2%	\pm 0.1%	\pm 0.2%
Vibration	10-55Hz 0.75mm or 10 g for 6 hours	\pm 1%	$\frac{\Delta V_{1-2}}{V_{1-3}}$	\pm 2%	\pm 0.1 % $\frac{\Delta V_{1-2}}{V_{1-3}}$ < \pm 0.2%

STANDARD RESISTANCE ELEMENT DATA				
STANDARD RESISTANCE VALUES	LINEAR LAW			T.C. -55°C +125°C
	MAX. POWER AT 85°C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH ELEMENT	
Ω	W	V	mA	ppm/°C
10	0.25	1.58	158	
20		2.23	112	0
50		3.53	77	+ 200
100		5	50	
200		7.07	35	
500		11.2	22	
1k		15.8	15.8	
2k		22.3	11.2	
5k		35.3	7.1	
10k		50	5	
20k		70.7	3.5	
25k		79	3.2	
50k		112	2.2	
100k		158	1.6	
200k	0.25	224	1.1	
250k	0.25	250	1.1	
500k	0.13	250	0.50	
1M	0.06	250	0.25	
2M	0.03	250	0.125	

MARKING

Printed: VISHAY trademark, series, style, ohmic value (in Ω , $k\Omega$, $M\Omega$), tolerance (in %) only if non standard, manufacturing date, marking of terminal 3.

SOLDERING RECOMMENDATIONS

Soldering cycle: 2 mn at 215°C or 5 seconds at 260°C or with an IRON 40 W: 3 seconds at 350°C.

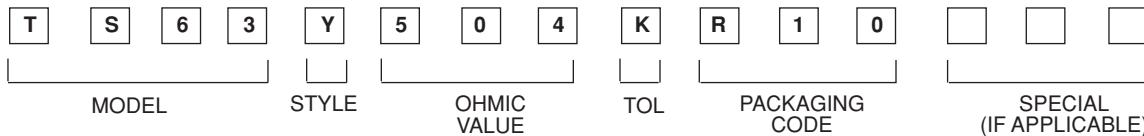
Soldering is recommended by reflow and vapor phase.

PACKAGING

- X, Y and Z types : on tape and reel (Dia. 330mm) of 500 pieces, code TR500.
- On request in magazine pack by 50 pieces (Tube) code TU.

ORDERING INFORMATION

TS63 SERIES	Y STYLE	500KΩ OHMIC VALUE	± 10% TOLERANCE	TR500 PACKAGING
TR500: Tape and reel On request: TU50: Tube				

SAP PART NUMBERING GUIDELINES

See the end of this data book for conversion tables

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